

CALIFORNIA ENERGY COMMISSION

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WEBSITES

Main website: www.energy.ca.gov

Children's website: www.energyquest.ca.gov

Consumer Information: www.ConsumerEnergyCenter.org



California Energy Commission Power Plant Certification Process Laws, Ordinances, Regulations and Standards

The California Energy Commission has jurisdiction over all thermal power plant projects 50 megawatts (MW) and larger proposed to be built and operated in California.

The Energy Commission's certification process carefully examines potential impacts to public health and environmental quality, and the engineering aspects of proposed power plants and all related facilities such as electric transmission lines, natural gas pipelines and water pipelines.

The Energy Commission's certification process has been certified by the State Resources Agency as functionally equivalent to the review conducted under the California Environmental Quality Act (CEQA).

In its review, the Energy Commission must determine whether the project will be constructed and operated in conformance with all applicable Laws, Ordinances, Regulations and Standards (LORS).

The following list represents the federal, state, and local LORS that are typically applicable and required for the construction and operation of power plant facilities in California. Not all LORS apply to all projects.

The type of technology, the fuel used in a power plant (natural gas, geothermal, etc.), and its location within California will dictate which LORS are applicable.

City and county LORS vary considerably throughout the state; therefore, the following list contains only general references to local LORS.

AIR QUALITY

Federal

Federal Clean Air Act

The Federal Clean Air Act requires any new major stationary sources of air pollution and any major modifications to major stationary sources to obtain an air pollution permit before commencing construction. This process is known as the New Source Review (NSR). Its requirements differ depending on the attainment status of the area where the major facility is to be located. Prevention of Significant Deterioration (PSD) requirements apply in areas that are in attainment of the national ambient air quality standards. The Non-attainment area NSR requirements apply to areas that have not been able to demonstrate compliance with national ambient air quality standards. The entire program, including both PSD and Non-attainment NSR permit reviews, is referred to as the federal NSR program.

Title V of the federal Clean Air Act requires states to implement and administer an operating permit program to ensure that large sources operate in compliance with the requirements included in the Code of Federal Regulations 40, part 70. A Title V permit contains all of the requirements specified in different air quality regulations which affect an individual project.

State

California State Health and Safety Code

The California State Health and Safety Code, Section 41700, requires that “no person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, response, health, or safety of any such person or the public, or which causes, or have a natural tendency to cause, injury or damage to business or property.”

The state’s Air Resources Board (ARB) promulgates state-level ambient air quality standards, which are, in general, more stringent than the national ambient air quality standards.

Local

The U.S. Environmental Protection Agency (EPA), typically has reviewed and approved the air quality management district ‘s (AQMD) regulations and has delegated to AQMD the implementation of the federal PSD, Non-attainment NSR, and Title V programs. The AQMD implements these programs through its own rules and regulations, which are, at a minimum, as stringent as the federal regulations. Proposed projects are subject to various AQMD rules and regulations. The rule entitled “New Source Review,” applies to all new and modified stationary sources. It defines requirements related to Best Available Control Technology (BACT), offsets, emission calculation procedures to

estimate bankable emission reduction credits (ERCs), and requirements for the federal acid rain program.

BIOLOGICAL RESOURCES

Federal

Endangered Species Act of 1973

Title 16, United States Code, section 1531 et seq., and Title 50, Code of Federal Regulations, part 17.1 et seq., designate and provide for protection of threatened and endangered plant and animal species, and their critical habitat.

Migratory Bird Treaty Act

Title 16, United States Code, sections 703 - 712, prohibits the take of migratory birds.

State

California Endangered Species Act of 1984

Fish and Game Code sections 2050 et seq. protects California's rare, threatened, and endangered species.

California Code of Regulations

Title 14, California Code of Regulations sections 670.2 and 670.5 list animals of California designated as threatened or endangered.

Fully Protected Species

Fish and Game Code sections 3511, 4700, 5050, and 5515 prohibits take of animals that are fully protected in California.

Significant Natural Areas

Fish and Game Code section 1930 et seq. designates certain areas such as refuges, natural sloughs, riparian areas and vernal pools as significant wildlife habitat.

Streambed Alteration Agreement

Fish and Game Code section 1600 et seq. Requires CDFG to review project impacts to waterways, including impacts to vegetation and wildlife from sediment, diversions and other disturbances.

Native Plant Protection Act of 1977

Fish and Game Code section 1900 et seq. designates state rare, threatened, and endangered plants.

Local

County General Plan Land Use, Open Space, and Conservation Elements may have goals, policies and implementation procedures related to biological resources.

CULTURAL RESOURCES

Cultural resources are indirectly protected under provisions of the federal Antiquities Act of 1906 (Title 16, United States Code, § 431 et seq.) and subsequent related legislation, policies and enacting responsibilities, e.g. federal agency regulations and guidelines for implementation of the Antiquities Act. The following laws, ordinances, regulations, standards and policies apply to the protection of cultural resources in California. Projects licensed by the Energy Commission are reviewed to ensure compliance with these laws.

Federal

Portions of a project may be on land managed by the US Bureau of Land Management (BLM). Therefore the project may become an “undertaking” according to federal definition and the BLM would be involved as the lead federal agency for cultural and paleontologic resources. If cultural resource sites are identified on non-federal lands and they meet federal criteria for eligibility for listing in the National Register of Historic Places, then federal laws also would apply to these resources.

National Environmental Policy Act (NEPA)

Title 42, United States Code, section 4321-et seq., requires federal agencies to consider potential environmental impacts of projects with federal involvement and to consider appropriate mitigation measures.

Federal Land Policy and Management Act (FLPMA)

Title 43, United States Code, Section 1701 et seq., requires the Secretary of Interior to retain and maintain public lands in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric water resource, and archeological values [Section 1701(a)(8)]; the Secretary, with respect to the public lands, shall promulgate rules and regulations to carry out the purposes of this Act and of other laws applicable to public lands [Section 1740].

Federal Register 48 44739-44738 190 September 30, 1983

Federal Guidelines for Historic Preservation Projects: The US Secretary of the Interior has published a set of Standards and Guidelines for Archaeology and Historic Preservation. These are considered to be the appropriate professional methods and techniques for the preservation of archaeological and historic properties. The Secretary’s standards and guidelines are used by federal agencies, such as the Forest Service, the Bureau of Land Management, and the National Park Service. The State Historic Preservation Office refers to these standards in its requirements for selection of qualified personnel and in the mitigation of potential impacts to cultural resources on public lands in California.

Section 106 of the federal guidelines (16 U.S.C. sec.106)

This section sets forth procedures to be followed for determining eligibility for nomination, the nomination, and the listing of cultural resources in the National Register of Historic Places (NHRP). The eligibility criteria and the process are used by federal, state and local agencies in the evaluation of the significance of cultural resources. Very

similar criteria and procedures are used by the state in identifying cultural resources eligible for listing in the State Register of Historic Resources.

Executive Order 11593, “Protection of the Cultural Environment,” May 13, 1971, (36 Federal Register, 8921)

This orders the protection and enhancement of the cultural environment through providing leadership, establishing state offices of historic preservation, and developing criteria for assessing resource values. American Indian Religious Freedom Act

Title 42, United States Code, Section 1996 protects Native American religious practices, ethnic heritage sites, and land uses.

Native American Graves Protection and Repatriation Act (1990)

Title 25, United States Code Section 3001, et seq. defines “cultural items”, “sacred objects”, and “objects of cultural patrimony”; establishes an ownership hierarchy; provides for review; allows excavation of human remains, but stipulates return of the remains according to ownership; sets penalties; calls for inventories; and provides for return of specified cultural items.

State

Public Resources Code

Public Resources Code, Section 5020.1 defines several terms, including the following:

- Historical resource. “Historical resource” includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.
- Substantial adverse change. “Substantial adverse change” means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.

Public Resources Code, Section 5024.1 establishes a California Register of Historic Places; sets forth criteria to determine significance; defines eligible properties; and lists nomination procedures.

Public Resources Code, Section 5097.5 states that any unauthorized removal or destruction of archaeological or paleontological resources on sites located on public land is a misdemeanor. As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority or public corporation, or any agency thereof.

Public Resources Code, Section 5097.98 defines procedures for notification of discovery of Native American artifacts or remains and for the disposition of such materials.

Public Resources Code, section 5097.99 prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions.

Public Resources Code, section 5097.991 states that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.

Public Resources Code, section 21000, et seq, California Environmental Quality Act (CEQA). This act requires the analysis of potential environmental impacts of proposed projects and requires application of feasible mitigation measures.

Public Resources Code, section 21083.2 states that the lead agency determines whether a project may have a significant effect on “unique” archaeological resources; if so, an EIR shall address these resources. If a potential for damage to unique archaeological resources can be demonstrated, such resources must be avoided; if they can’t be avoided, mitigation measures shall be required. The law also discusses excavation as mitigation; discusses the costs of mitigation for several types of projects; sets time frames for excavation; defines “unique and non-unique archaeological resources”; provides for mitigation of unexpected resources; and sets financial limitations for this section.

Public Resources Code, section 21084.1 indicates that a project may have a significant effect on the environment if it causes a substantial adverse change in the significance of a historic resource; the section further defines a “historic resource” and describes what constitutes a “significant” historic resource.

Public Resources Code, section 5097.98. If the county coroner determines that the remains are Native American, the coroner is required to contact the Native American Heritage Commission, which is then required to determine the “Most Likely Descendant” to inspect the burial and to make recommendations for treatment or disposal.

CEQA Guidelines

CEQA Guidelines, Title 14, California Code of Regulations, section 15126.4

“Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects”, sub-section (b) “Mitigation Measures Related to Impacts on Historical Resources”. Subsection (b) discusses impacts of maintenance, repair, stabilization, restoration, conservation, or reconstruction of a historical resource. Subsection (b) discusses documentation as a mitigation measure. Subsection (b) discusses mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place, or by data recovery through excavation if avoidance or preservation in place is not feasible. Data recovery must be conducted in accordance with an adopted data recovery plan.

CEQA Guidelines, Title 14, California Code of Regulations, section 15064.5

“Determining the Significance of Impacts to Archaeological and Historical Resources”. Subsection (a) defines the term “historical resources”. Subsection (b) explains when a project may be deemed to have a significant effect on historic resources and defines terms used in describing those situations. Subsection (c) describes CEQA’s applicability

to archaeological sites and provides a bridge between the application of the terms “historic resources” and a “unique archaeological resources”.

CEQA Guidelines, Title 14, California Code of Regulations, section 15064.7 “Thresholds of Significance”. This section encourages agencies to develop thresholds of significance to be used in determining potential impacts and defines the term “cumulatively significant”.

CEQA Guidelines, Appendix G: “Issue V: Cultural Resources”. Lists four questions to be answered in determining the potential for a project to impact archaeological, historic, and paleontologic resources.

California Penal Code

California Penal Code, section 622.5 -- Anyone who willfully damages an object or thing of archaeological or historic interest can be found guilty of a misdemeanor.

California Health and Safety Code

California Health and Safety Code, section 7050.5. If human remains are discovered during construction, the project owner is required to contact the county coroner.

Local

Although the Energy Commission has pre-emptive authority over local laws, it typically ensures compliance with local laws, ordinances, regulations, standards, plans, and policies and local laws may have requirements related to Cultural Resources.

POWER PLANT EFFICIENCY

Federal

No federal laws apply to the efficiency of this project.

State

California Environmental Quality Act

CEQA requires that an environmental analysis be completed prior to determining whether to approve an Application for Certification (AFC) of a power plant. This analysis must include an identification of the significant effects of a project on the environment, feasible mitigation measures, and alternatives to the project (Pub. Resources Code, § 21002.1).

CEQA Guidelines state that the environmental analysis "...shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy" (Cal. Code Regs., tit. 14, § 15126.4(a)(1)). The Guidelines further require consideration of the project's energy requirements and energy use efficiency, its effects on local and regional energy supplies and energy resources, its requirements for additional energy supply capacity; its compliance with existing energy standards, and any alternatives that could reduce wasteful, inefficient and unnecessary consumption of energy (Cal. Code Regs., tit. 14, Appendix F).

Warren-Alquist Act

The Warren-Alquist Act requires the submittal to the Energy Commission of an Notice of Intent (NOI) prior to filing an AFC (Pub. Resources Code, § 25502); this NOI process commonly takes twelve months. Exemption from the NOI process is allowed for certain projects, including cogeneration plants (Pub. Resources Code, § 25540.6(a)(1)). Cogeneration, in turn, is defined in terms of efficiency standards (Pub. Resources Code, § 25134).

Local

No local or county ordinances apply to power plant efficiency.

FACILITY DESIGN

The applicable LORS for engineering design are included in each AFC as Appendices for each respective discipline. These LORS include: Title 24, California Code of Regulations, which adopts the current edition of the CBC as minimum legal building standards; the current California Building Code (CBC) for design of structures; the current (1996) Structural Engineers Association of California's Recommended Lateral Force Requirements, for seismic design; ASME-American Society of Mechanical Engineers Boiler and Pressure Vessel Code; and NEMA-National Electrical Manufacturers Association.

GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

Federal

There are no federal LORS for geological hazards and resources, or grading and erosion control. The United States Bureau of Land Management (BLM) requires an excavation permit for excavations and grading on land under their jurisdiction. For federal LORS related to paleontological resources that may be applicable also see Cultural Resources.

State and Local

California Building Code

The California Building Code (CBC) 2001 edition is based upon the Uniform Building Code (UBC), 2000 edition, published by the International Conference of Building Officials. The CBC is a series of standards that are used in the investigation, design, (Chapters 16 and 18) and construction (including grading and erosion control as found in Appendix Chapter 33) that were based upon the UBC that includes supplemental standards specific to California.

CEQA Guidelines

The CEQA Guidelines Appendix G provides a checklist of questions that a lead agency should normally address if relevant to a project's environmental impacts. Section (V) (c) asks if the project will directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Sections (VI) (a), (b), (c), (d), and (e) pose questions that are focused on whether or not the project would expose persons or structures to geological hazards.

Sections (X) (a) and (b) pose questions about the project's affect on mineral resources.

HAZARDOUS MATERIALS MANAGEMENT

Federal

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

This Act and the Clean Air Act of 1990 established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. The Act (codified in 40 C.F.R., §68.110 et seq.) requires the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. The requirements of these Acts are reflected in the California Health and Safety Code, section 25531 et seq.

State

The California Health and Safety Code

Section 25534 directs facility owners, storing or handling acutely hazardous materials in reportable quantities, to develop a Risk Management Plan (RMP) and submit it to appropriate local authorities, the United States Environmental Protection Agency (EPA), and the designated local Administering Agency for review and approval. The plan must include an evaluation of the potential impacts associated with an accidental release, the likelihood of an accidental release occurring, the magnitude of potential human exposure, any preexisting evaluations or studies of the material, the likelihood of the substance being handled in the manner indicated, and the accident history of the material. This new, recently developed program supersedes the California Risk Management and Prevention Plan (RMPP).

Title 8, California Code of Regulations

Section 5189 requires facility owners to develop and implement effective safety management plans to insure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMP process.

California Health and Safety Code

Section 41700 requires that "No person shall discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property."

California Government Code

Section 65850.2 restricts the issuance of an occupancy permit to any new facility involving the handling of acutely hazardous materials until the facility has submitted an RMP to the administering agency with jurisdiction over the facility.

Local and Regional

The Uniform Fire Code (UFC)

The UFC contains provisions regarding the storage and handling of hazardous materials. These provisions are contained in Articles 79 and 80 (UFC, 2000). These articles contain minimum setback requirements for outdoor storage of ammonia.

The California Building Code (CBC)

The CBC 2001 contains requirements regarding the storage and handling of hazardous materials. The Chief Building Official must inspect and verify compliance with these requirements prior to issuance of an occupancy permit.

LAND USE

State

California Coastal Act of 1976 (Pub. Resources Code §30000 et seq.)

The California Coastal Act establishes a comprehensive scheme to govern land use planning along the entire California coast. The Coastal Act sets forth general policies (§30200 et seq.) which govern the California Coastal Commission's review of permit applications and local plans. Specific to energy facilities, the Coastal Act requires that the Coastal Commission designate specific locations within the coastal zone where the establishment of a thermal power plant subject to the Warren-Alquist Act could "prevent the achievement of the objectives" of the Coastal Act (§30413(b)). Pursuant to section 30500, each local government lying within the coastal zone is required to prepare a local coastal program (LCP) for management of that portion of the coastal zone within its jurisdiction. Once the Coastal Commission certifies a LCP, the authority to issue coastal development permits for development within the coastal zone is delegated to the local jurisdiction (§30519(a)). Notwithstanding section 30519(a), section 30600(a) of the Coastal Act specifies that a proponent must obtain a coastal development permit for any development "other than a facility subject to the provisions of Section 25500" (i.e., a thermal power plant or related facility subject to the Warren-Alquist Act).

Delta Protection Act of 1992 (Public Resources Code § 29700 et seq.)

This Act created the Delta Protection Commission with a mandate to develop a long-term resource management plan for the Delta Primary Zone. The goals of the plan are to "protect, maintain and, where possible, enhance and restore the overall quality of the delta environment, including, but not limited to, agriculture, wildlife habitat, and recreational activities." All local general plans for areas within the Primary Zone are required to be consistent with the regional plan. The Secondary Zone consists of areas within the statutory Delta (as defined in Section 12220 of the California Water Code) but not part of the Primary Zone. Local general plans for land use within the Secondary Zone are not required to conform to the regional plan.

local

General Plans

General Plan policies relevant to projects may include:

- land use elements;
- public facilities, institutions, and utilities elements; and
- traffic and circulation elements.

Area Specific Plans

Area specific plans may also contain requirements applicable to siting cases.

Zoning Ordinances

Zoning ordinances generally protect the public health, safety, and general welfare, and implement the policies of the General Plan. These ordinances contain regulations that establish zoning districts, govern the use of land and the placement of buildings and improvements within districts, and establish performance standards.

NOISE

Federal

Occupational Safety and Health Act

Under the Occupational Safety and Health Act of 1970 (29 USC § 651 et seq.), the Department of Labor, Occupational Safety and Health Administration (OSHA) has adopted regulations (29 CFR § 1910.95) that establish maximum noise levels to which workers at a facility may be exposed. These OSHA noise regulations are designed to protect workers against the effects of noise exposure, and list permissible noise level exposure as a function of the amount of time during which the worker is exposed. OSHA regulations also dictate hearing conservation program requirements and workplace noise monitoring requirements.

There are no federal laws governing offsite (community) noise.

State

Similarly, there are no state regulations governing offsite (community) noise. Rather, state planning law (Gov. Code, § 65300) requires that all counties and cities prepare and adopt a General Plan. Government Code section 65302(f) requires that a noise element be prepared as part of the General Plan. This element is to “address existing and foreseeable noise problems”

Cal-OSHA

As a result of the passage of Cal-OSHA the California Occupational Safety and Health Administration (Cal-OSHA) has promulgated Occupational Noise Exposure Regulations (Cal. Code Regs., tit. 8, § 5095 et seq.) that set employee noise exposure limits. These standards are equivalent to the federal OSHA standards described above.

CEQA

CEQA requires that significant environmental impacts be identified, and that such impacts be eliminated or mitigated to the extent feasible. The applicable CEQA Guidelines (Cal. Code Regs., tit. 14, §15000 et seq., Appendix G §XI) explain that a significant effect from noise may exist if a project would result in:

- (a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- (b) Exposure of persons to, or generation of, excessive ground vibration or ground-borne noise levels.
- (c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- (d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Local

County General Plan - Noise Element

Typically the county has established environmental noise limits based on the land use of the property receiving the noise. The permissible noise levels are generally available in the county or city general plan noise element.

PUBLIC HEALTH

Federal

Clean Air Act of 1970

The Clean Air Act of 1970 (42 U.S.C., section 7401 et seq.) required establishment of ambient air quality standards to protect the public from the effects of air pollutants. These standards have been established by the United States Environmental Protection Agency (EPA) for the major air pollutants, nitrogen dioxide, ozone, sulfur dioxide, carbon monoxide, sulfates, particulate matter with a diameter of 10 micron or less (PM10) and lead. The Act required states to adopt plans to ensure compliance by 1982. These plans are known as the State Implementation Plans (SIPs). The EPA considers it appropriate to differentiate between PM10 and particulate matter with a diameter of 2.5 micron or less (PM2.5). Such particulate matter may serve as a source of exposure to both criteria and noncriteria pollutants.

State

California Health and Safety Code

California Health and Safety Code section 39606 requires the California Air Resources Board (CARB) to establish California's ambient air quality standards to reflect the California-specific conditions that influence its air quality. Such standards have been established by the CARB for ozone, carbon monoxide, and sulfur dioxide, PM10, lead, hydrogen sulfide, vinyl chloride and nitrogen dioxide. The same biological mechanisms underlie some of the health effects of most of these and the noncriteria pollutants. The California standards are listed together with the corresponding federal standards in the **Air Quality** section.

California Health and Safety Code section 41700 states that "No person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have a natural tendency to cause injury or damage business or property."

The California Health and Safety Code section 39650 et seq. mandates the California Environmental Protection Agency (Cal-EPA) to establish safe exposure limits for toxic, noncriteria air pollutants and identify the best available methods for their control. These laws also require that the new source review rules for each air district include regulations establishing procedures to control the emission of these pollutants. The toxic emissions from natural gas combustion are listed in CARB's April 11, 1996 California Toxic Emissions Factors (CATEF) database for natural gas-fired combustion turbines. Cal-EPA has developed specific cancer potency estimates for assessing their related cancer risks at specific exposure levels. For noncancer-causing toxic air pollutants, Cal-EPA established specific no-effects levels (known as reference exposure levels) for assessing the likelihood of producing health effects at specific exposure

levels. Such health effects would be considered likely only when exposure exceeds these reference levels. Staff uses these Cal-EPA potency estimates and reference exposure values in its health risk assessments.

California Health and Safety Code section 44300 et seq. requires facilities which emit large quantities of criteria pollutants and any amount of noncriteria pollutants to provide the local air district an inventory of toxic emissions. Such facilities may also be required to prepare a quantitative health risk assessment to address the potential health risks involved. The CARB and the San Joaquin Valley Air Quality Management District will ensure implementation of these requirements for the proposed project.

Local

Typically the local Air Pollution Control District has no specific rules implementing Health and Safety Code section 44300. It may however, require the results of a health risk assessment as part of the application for the Authority to Construct (ATC).

SOCIOECONOMICS

Federal

Executive Order 12898, “Federal Actions to address Environmental Justice (EJ) in Minority Populations and Low-Income Populations.” The order focuses federal attention on the environment and human health conditions of minority communities and directs agencies to achieve environmental justice as part of this mission. The Executive Order requires the US Environmental Protection Agency (EPA) and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this problem. Agencies are required to identify and address any disproportionately high and/or adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations. The Energy Commission receives federal funds and is thus subject to this Executive Order.

State

California Government Code, section 65996-65997

As amended by SB 50 (Stats. 1998, ch. 407, sec. 23), states that public agencies may not impose fees, charges or other financial requirements to offset the cost for school facilities.

Local

County General Plan

The public facilities component is typically pertinent to socioeconomic considerations in siting cases. In evaluating a development application, a county may consider impacts on the local school districts.

TRAFFIC AND TRANSPORTATION

Federal

Code of Federal Regulations:

Title 49, Code of Federal Regulations, Section 171-177, governs the transportation of hazardous materials, the type of materials defined as hazardous, and the marking of the transportation vehicles.

Title 49, Code of Federal Regulations, Section 350-399, and Appendices A-G, Federal Motor Carrier Regulations, addresses safety considerations for the transport of goods, materials and substances over public highways.

State

The California Vehicle Code

California Vehicle Code, section 353 defines hazardous materials.

California Vehicle Code, sections 31303-31309 regulate the highway transportation of hazardous materials, the routes used, and restrictions thereon.

California Vehicle Code, sections 31600-31620 regulate the transportation of explosive materials.

California Vehicle Code, sections 32000-32053, regulate the licensing of carriers of hazardous materials and include noticing requirements.

California Vehicle Code, sections 32100-32109, establish special requirements for the transportation of inhalation hazards and poisonous gases.

California Vehicle Code, sections 34000-34121, establish special requirements for the transportation of flammable and combustible liquids over public roads and highways.

California Vehicle Code, sections 34500 et seq., regulate the safe operation of vehicles, including those that are used for the transportation of hazardous materials.

California Vehicle Code, sections 2500-2505, authorize the issuance of licenses by the Commissioner of the California Highway Patrol for the transportation of hazardous materials including explosives.

California Vehicle Code, sections 13369, 15275, and 15278, address the licensing of drivers and the classifications of licenses required for the operation of particular types of vehicles. In addition, these sections require the possession of certificates permitting the operation of vehicles transporting hazardous materials.

California Streets and Highways Code

California Streets and Highways Code, sections 117 and 660-72, and California Vehicle Code 35780 et seq., require permits for the transportation of oversized loads on county roads.

California Streets and Highways Code, sections 660, 670, 1450, 1460 et seq., and 1480 et seq., regulate right-of-way encroachment and the granting of permits for encroachment on state and county roads.

California Health and Safety Code

California Health and Safety Code, section 25160 et seq., addresses the safe transport of hazardous materials.

Local

County and Regional Plans

The county and regional general plans may set up local goals and guidance policies about building and transportation improvements and introduce planning tools essential for achieving the local and regional transportation goals and policies. Typical goals and policies have included considerations such as:

- private development access to existing roadway network,
- future growth and improvement based on traffic monitoring data,
- traffic congestion management,
- truck traffic on highways,
- truck routes,
- transportation of hazardous materials, and
- road pavement damage.

VISUAL RESOURCES

Federal and State

Proposed projects, including the linear facilities, located on private lands are not subject to federal land management requirements. Likewise, if no roadway in the project vicinity is a designated or eligible State Scenic Highway, no federal or state regulations pertaining to scenic resources are applicable to the project.

Local

City and County General Plans

Policies within city and county general plans that are relevant to siting projects have included policies related to:

- land use elements,
- community image,
- parks and recreation elements,
- public facilities, institutions, and utilities elements,
- zoning ordinances,
- land use elements, and
- open space elements.

POWER PLANT RELIABILITY

Presently, there are no LORS that establish either power plant reliability criteria or procedures for attaining reliable operation. However, the Energy Commission must make findings as to the manner in which the PDEF is to be designed, sited and operated to ensure safe and reliable operation (Cal. Code Regs., tit. 20, § 1752(c)). Staff takes the approach that a project is acceptable if it does not degrade the reliability of the utility system to which it is connected. This is likely the case if the project exhibits reliability at least equal to that of other power plants on that system.

WASTE MANAGEMENT

Federal

Resource Conservation and Recovery Act (42 U.S.C. Section 6921 et seq.)

The Resource Conservation and Recovery Act (RCRA) establishes requirements for the management of hazardous wastes from the time of generation to the point of ultimate treatment or disposal. Section 6922 requires generators of hazardous waste to comply with requirements regarding:

- record keeping practices which identify quantities of hazardous wastes generated and their disposition,
- labeling practices and use of appropriate containers,
- use of a manifest system for transportation to permitted treatment, storage, or disposal facilities, and
- submission of periodic reports to the U.S. Environmental Protection Agency (EPA) or authorized state agency.

Title 40, Code of Federal Regulations, part 260

These sections contain regulations promulgated by the EPA to implement the requirements of RCRA as described above. Characteristics of hazardous waste are described in terms of ignitability, corrosivity, reactivity, and toxicity. Specific types of wastes are also listed.

State

California Health and Safety Code, section 25100 et seq. (Hazardous Waste Control Act of 1972, as amended).

This act creates the framework under which hazardous wastes must be managed in California. It mandates the State Department of Health Services (now the Department of Toxic Substances Control under the California Environmental Protection Agency, or Cal EPA) to develop and publish a list of hazardous and extremely hazardous wastes, and to develop and adopt criteria and guidelines for the identification of such wastes. It also requires hazardous waste generators to file notification statements with Cal EPA and creates a manifest system to be used when transporting such wastes.

Title 14, California Code of Regulations, section 17200 et seq. (Minimum Standards for Solid Waste Handling and Disposal)

These regulations set forth minimum standards for solid waste handling and disposal, guidelines to ensure conformance of solid waste facilities with county solid waste management plans, as well as enforcement and administration provisions.

Title 22, California Code of Regulations, section 66262.10 et seq. (Generator Standards)

These sections establish requirements for generators of hazardous waste. Waste generators must determine if their wastes are hazardous according to specified characteristics or lists of hazardous wastes. As in the federal program, hazardous waste generators must obtain EPA identification numbers, prepare manifests before transporting the waste off-site, and use only permitted treatment, storage, and disposal facilities. Additionally, generators must use registered hazardous waste transporters for any offsite shipments. Requirements are also established for record keeping, reporting, packaging, and labeling of hazardous wastes, use of containers and tanks for hazardous waste storage, and limiting the amount of time that hazardous waste can be stored onsite.

Local**County General Plan Public Facilities Element**

Generators and processors of hazardous waste may be encouraged to develop long-term waste management programs. Large generators of hazardous waste may be encouraged to recycle, treat and detoxify their wastes on site.

TRANSMISSION LINE SAFETY AND NUISANCE

Federal

Code of Federal Regulations

Title 14, Part 77 of the Federal Code of Regulations (CFR), "Objects Affecting the Navigation Space". Provisions of these regulations specify the criteria used by the Federal Aviation Administration (FAA) for determining whether a "Notice of Proposed Construction or Alteration" is required for potential obstruction hazards. The need for such a notice depends on factors related to the height of the structure, the slope of an imaginary surface from the end of nearby runways to the top of the structure, and the length of the runway involved. Such notification allows the FAA to ensure that the structure is located to avoid any significant hazards to area aviation.

FAA Advisory Circular (AC) No. 70/460-2H, "Proposed Construction and or Alteration of Objects that May Affect the Navigation Space". This circular informs each proponent of a project that could pose an aviation hazard of the need to file the "Notice of Proposed Construction or Alteration" (Form 7640) with the FAA.

FAA AC No. 70/460-1G, "Obstruction Marking and Lighting". This circular describes the FAA standards for marking and lighting objects that may pose a navigation hazard as established using the criteria in Title 14, Part 77 of the CFR.

Federal Communications Commission Regulations

Transmission line-related radio-frequency interference is one of the indirect effects of line operation as produced by the physical interactions of line electric fields. The level of such interference usually depends on the magnitude of the electric fields involved. Because of this, the potential for such impacts could be assessed from field strength estimates obtained for the line. The following regulations are intended to ensure that such lines are located away from areas of potential interference and that any interference is mitigated whenever it occurs.

Federal Communications Commission (FCC) regulations in Title 47 CFR, Section 15.25. Provisions of these regulations prohibit operation of any devices producing force fields that interfere with radio communications, even if (as with transmission lines) such devices are not intentionally designed to produce radio-frequency energy. Such interference is due to the radio noise produced by the action of the electric fields on the surface of the energized conductor. The process involved is known as corona discharge but is referred to as spark gap electric discharge when it occurs within gaps between the conductor and insulators or metal fittings. When generated, such noise manifests as perceivable interference with radio or television signal reception or interference with other forms of radio communication. Since the level of interference depends on factors such as line voltage, distance from the line to the receiving device, orientation of the antenna, signal level, line configuration and weather conditions, maximum interference levels are not specified as design criteria for modern transmission lines. The FCC requires each line operator to mitigate all complaints about interference on a case-

specific basis. Staff usually recommends specific conditions of certification to ensure compliance with this FCC requirement. Since electric fields cannot penetrate the soil and other objects, underground lines do not produce the radio noise associated with overhead lines.

Several design and maintenance options are available for minimizing these electric field-related impacts. When incorporated in the line design and operation, such measures also serve to reduce the line-related audible noise discussed below.

State

General Order 52

General Order 52 (GO-52), California Public Utilities Commission (CPUC). Provisions of this order govern the construction and operation of power and communications lines and specifically deal with measures to prevent or mitigate inductive interference. Such interference is produced by the electric field induced by the line in the antenna of a radio signal receiver.

General Order 128

GO-128 “Rules for Construction of Underground Electric Supply and Communications Systems”. Provisions of this order establish requirements and minimum standards for the safe construction of underground AC power and communications circuits.

General Order 95

General Order 95 (GO-95), CPUC, “Rules for Overhead Electric Line Construction”. This order specifies tree trimming criteria to minimize the potential for power line-related fires.

GO-95, CPUC, Rules for Overhead Line Construction”. These rules specify uniform statewide requirements for overhead line construction regarding ground clearance, grounding, maintenance and inspection. Implementing these requirements usually ensures the safety of the general public and line workers.

California Code of Regulations

Title 14 Section 1250 of the California Code of Regulations, “Fire Prevention Standards for Electric Utilities”. This code specifies utility-related measures for fire prevention.

Title 8, Section 2700 et seq., “High Voltage Electric Safety Orders”. These safety orders establish essential requirements and minimum standards for safely installing, operating, and maintaining electrical installations and equipment.

National Electrical Safety Code

National Electrical Safety Code, Part 2: Safety Rules for Overhead Lines. Provisions in this part of the code specify the national safe operating clearances applicable in areas where the line might be accessible to the public. Such requirements are intended to minimize the potential for direct or indirect contact with the energized line.

Local

There are no local laws or regulations specifically aimed at the physical structure or dimensions of electric power lines to limit their obstruction or hazardous shock hazards, or eliminate the interactive effects of their electric or magnetic fields. All the noted LORS are implemented industry wide to ensure that lines are uniformly constructed to reflect existing health and safety information while ensuring efficiency and reliability.

TRANSMISSION SYSTEM ENGINEERING

Federal

There are no federal LORS related to transmission system engineering.

State

General Order 95

California Public Utilities Commission (CPUC) General Order 95 (GO-95), "Rules for Overhead Electric Line Construction" formulates uniform requirements for construction of overhead lines. Compliance with this order will ensure adequate service and safety to persons engaged in the construction, maintenance, operation or use of overhead electric lines and to the public in general.

General Order 128

CPUC General Order 128 (GO-128), "Rules for Construction of Underground Electric Supply and Communications Systems," establishes uniform requirements and minimum standards to be used for underground supply systems to ensure adequate service and safety.

CPUC Rule 21 provides standards for the reliable connection of parallel generating stations connected to participating transmission owners.

CAL-ISO

Cal-ISO Reliability Criteria also provide policies, standards, principles and guides to assure the adequacy and security of the electric transmission system. With regard to power flow and stability simulations, these Planning Standards are similar to WSCC's Criteria for Transmission System Contingency Performance and the NERC Planning Standards. The Cal-ISO Reliability Criteria incorporate the WSCC Criteria and NERC Planning Standards. However, the Cal-ISO Reliability Criteria also provide some additional requirements that are not found in the WSCC Criteria or the NERC Planning Standards. The Cal-ISO Reliability Criteria apply to all existing and proposed facilities interconnecting to the Cal-ISO controlled grid.

Cal-ISO Scheduling Protocols and Dispatch Protocols require conformance with NERC, WSCC, and Local Area Reliability and Planning Criteria. These standards will be applied in assessing the system reliability implications of the PDEF. Also of major importance to the PDEF and other privately funded projects which may sell through the California Power Exchange (Cal-PX) is the Cal-ISO Day/Hour Ahead Inter-zonal Congestion Management Scheduling Protocol (SP 10), the Transmission System Loss Management Scheduling Protocol (SP 4), and the Creation of the Real Time Merit Order Stack (SP 11). The Congestion Management Scheduling Protocol provides that dispatch not violate system criteria as market participants are requesting generation dispatch or the use of major interties. The Real Time Merit Order Stack is developed based on increasing energy bid prices so that the least cost bids are accepted early on and if congestion is anticipated the highest bids are not selected. The Transmission

System Loss Management Scheduling Protocol uses the Cal-ISO power flow model to identify the effects on total transmission losses at each generating unit and scheduling point. Additional calculations are performed to determine if the participant will be paid more or less than, for instance, the generating units dispatched net power output (ISO 1998e, ISO 1998f).

SOIL & WATER RESOURCES

Federal

Clean Water Act

The Clean Water Act (33 USC §1257 et seq.) requires states to set standards to protect water quality. Although water quality standards are to be met through the regulation of point source discharges to surface water, Section 307 of the Act and Code of Federal Regulations 403, requires that all non-domestic discharges to wastewater treatment plants must receive a pretreatment permit. This permit is to ensure that the discharge will not interfere with the treatment processes at the plant nor make the facility violate its own discharge permit limitations.

State

State Water Resources Control Board

Under provisions of the Clean Water Act, the State Water Resources Control Board (SWRCB) adopted two general National Pollutant Discharge Elimination System (NPDES) Permits for control of storm-water runoff during construction and operation of industrial facilities, such as a power plant and associated facilities.

Under the General Construction Activity Storm Water Permit, developers are required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) if activities disturb greater than five acres. This plan identifies best management practices to reduce sediment, oil and other contaminants in storm-water discharges from the site. The general NPDES permit for Industrial Activities also requires developers of industrial facilities, such as power plants, to prepare and implement a SWPPP that identifies best management practices to reduce the discharge of contaminants from facility operation in storm-water discharge.

The SWRCB has also adopted a number of policies that provide guidelines for water quality protection. The principle policy of the SWRCB which addresses the specific siting of energy facilities is the Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Power Plant Cooling (adopted by the SWRCB on June 19, 1976 by Resolution 75-58). This policy states that use of fresh inland waters should only be used for power Plant cooling if other sources or other methods of cooling would be environmentally undesirable or economically unsound. This SWRCB policy requires that power plant cooling water should, in order of priority come from wastewater being discharged to the ocean, ocean water, brackish water from natural sources or irrigation return flow, inland waste waters of low total dissolved solids, and other inland waters. This policy goes on to address cooling water discharge prohibitions.

Porter-Cologne Water Quality Control Act of 1967

Section 13551 of the Water Code prohibits the use of "...water from any source of quality suitable for potable domestic use for nonpotable uses, including ...industrial... uses, if suitable recycled water is available..." given conditions set forth in Section

13550. These conditions take into account the quality and cost of the water, the potential for public health impacts and the effects on downstream water rights, beneficial uses and biological resources.

Section 13552.6 of the Water Code states that the use of potable domestic water for cooling towers, if suitable recycled water is available, is an unreasonable use of water. The availability of recycled water is based upon a number of criteria, which must be taken into account by the SWRCB. These criteria are that: the quality and quantity of the reclaimed water are suitable for the use; the cost is reasonable; the use is not detrimental to public health; will not impact downstream users or biological resources; and will not degrade water quality.

Section 13552.8 of the Water Code states that any public agency may require the use of recycled water in cooling towers if certain criteria are met. These criteria include that recycled water is available and meets the requirements set forth in section 13550; the use does not adversely affect any existing water right; and if there is public exposure to cooling tower mist using recycled water, appropriate mitigation or control is necessary.

Local

Local sewer system use rules and regulations may set forth the pretreatment requirements for non-domestic discharges to the sewer and wastewater treatment system. Also, there may be local requirements using the California Building Code for grading and erosion control and local ordinances controlling non-storm water discharges to the city's storm water system.

WORKER SAFETY AND FIRE PROTECTION

Federal

Code of Federal Regulations

29 U.S.C. §651 et seq. (Occupational Safety and Health Act of 1970)

29 C.F.R. §1910.120 (HAZWOPER Standard) Defines the regulations for Hazardous Waste Operations and Emergency Response. This section covers the clean-up operations, hazardous removal work, corrective actions, voluntary clean-up operations, monitoring, and emergency response required by Federal, state, and local agencies of hazardous substances that are present at controlled and uncontrolled hazardous waste sites.

29 C.F.R. §§1910.1 - 1910.1500 (Occupational Safety and Health Administration Safety and Health regulations)

29 C.F.R. §§1952.170 - 1952.175 (Approval of California's plan for enforcement of its own Safety and Health requirements, in lieu of most of the federal requirements found in 1910.1 - 1910.1500)

State

California Code of Regulations

Title 8, California Code of Regulations, §450 et seq. (Applicable requirements of the Division of Industrial Safety, including Unfired Pressure Vessel Safety Orders, Construction Safety Orders, Electrical Safety Orders, and General Industry Safety Orders)

Title 8, California Code of Regulation, §5192 (HAZWOPER Standard) Defines the regulations for Hazardous Waste Operations and Emergency Response. This section covers the clean-up operations, hazardous removal work, corrective actions, voluntary clean-up operations, monitoring, and emergency response required by Federal, state, local agencies of hazardous substances that are present at controlled and uncontrolled hazardous waste sites.

Local

Uniform Fire Code (UFC)

The uniform fire code contains provisions necessary for fire prevention and information about fire safety, special occupancy uses, special processes, and explosive, flammable, combustible and hazardous materials.

Uniform Fire Code Standards. This is a companion publication to the UFC and contains standards of the American Society for Testing and Materials and of the National Fire Protection Association.

California Building Code (Cal. Code Regs., tit. 24, §501 et seq.)

The California Building Code is designed to provide minimum standards to safeguard human life, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, etc. of buildings and structures.